Frequent debridement improves wound healing

A study in *JAMA Dermatology* reports that frequent debridements speed wound healing.

"The more frequent the debridement, the better the healing outcome," concludes "**Frequency of debridements and time to heal: A retrospective cohort study of 312 744 wounds**." The median number of debridements was two.

Most of the wounds in the 154,644 patients were diabetic foot ulcers, venous leg ulcers, and pressure ulcers. The study authors note that debridement is a "key process" in wound bed preparation and starting the healing process.

The findings are congruent with previous studies and are based on an analysis of the largest wound data set to date.

Too many mast cells can slow wound healing

Normally, mast cells promote wound healing, but when lymphedema is present, too many mast cells can delay healing, according to a study conducted in mice and published by the *Journal of Leukocyte Biology*.

An overabundance of mast cells leads to

overproduction of interleukin-10, which can prevent certain white blood cells from reaching the wound, according to "**Delayed wound healing due to increased interleukin-10 expression in mice with lymphatic dysfunction**."

"**Improvement of lymphedema is important for treatment of skin ulcers**," says Makoto Sugaya, MD, PhD, a study coauthor. "It is not just fluid retention, but inflammatory cells and cytokines that cause delayed wound healing."

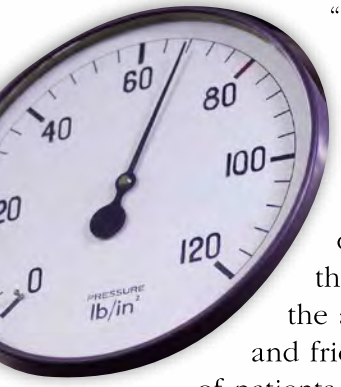
Young-onset type 2 diabetes more harmful than type 1

Among patients with an onset of diabetes between ages 15 and 30, those with type 2 diabetes experience higher mortality, more diabetes-related complications, and more " unfavorable" cardiovascular risk factors than those with type 1, according to a study published by *Diabetes Care*.

"**Long-term complications and mortality in young-onset diabetes: Type 2 diabetes is more hazardous and lethal than type 1 diabetes**," which analyzed 354 patients with type 2

diabetes and 470 patients with type 1 diabetes, found that despite equivalent glycemic control and shorter disease duration, unfavorable cardiovascular risk factors were greater in the type 2 group, "even soon after diabetes onset." Neuropathy and macrovascular complications were also higher.

Study identifies how sacral wound dressings reduce ulcer risk



"**Enhancing pressure ulcer prevention using wound dressings: what are the modes of action?**" studied how sacral wound dressings work to reduce risk of ulceration and found that their use can decrease the amplitude of shear stress and friction that reaches the skin of patients at risk for ulcers. The dressings can also "redirect these forces" to wider areas, which reduces mechanical load.

A study in *International Wound Journal* that bench tested nine commercially available dressings concludes that the dressings can redistribute pressure, which provides greater load redistribution.

Activated protein C improves chronic lower leg ulcers

Topical application of activated protein C (APC) on chronic lower leg ulcers in patients with diabetes results in better healing and improved patient quality of life, according to "**Treatment of chronic diabetic lower leg ulcers with activated protein C: a randomised placebo-controlled, double-blind pilot clinical trial**," published by *International Wound Journal*.

The wound area in those who received APC was significantly reduced. Biopsies of the wound edges showed "reduced inflammatory cell infiltration and increased vascular proliferation" after APC treatment. Patients treated with APC also experienced significantly reduced stress scores, indicating an improvement in quality of life.

APC was applied twice weekly for 4 weeks, with the final follow-up at 20 weeks. A total of 6 patients received APC and 6 received a placebo.

The researchers conclude that the pilot study "suggests that APC is a safe topical agent for healing chronic lower leg ulcers in patients with diabetes and provides supporting evidence for a larger clinical trial."

Risk factors for orthopedic SSIs identified

Diabetes, smoking, surgery longer than 3 hours, no antibiotic prophylaxis, and previous operations are all risk factors for surgical site infections (SSIs) after orthopedic surgery, finds a study published by the *American Journal of Infection Control*.

"**Epidemiology and outcomes of surgical site infections following orthopedic surgery**" studied 2,061 patients who underwent orthopedic surgery during a 2-year period. Of the 45 clinical SSIs, 33 had a positive culture; 68.6% of bacterial isolates were resistant to cefuroxime.

Self-reported physical functioning predicts mortality in patients with diabetes

Patients with diabetes who report poor physical functioning had a 39% higher death rate even after adjusting for age, sex, race/ethnicity, education, income, body mass index, smoking, and comorbidities, according to "**Self-reported physical functioning and mortality among individuals with type 2 diabetes: insights from TRIAD**."

The researchers studied 7,894 patients (average age of 62 years at baseline) with type 2 diabetes in the Translating Research Into Action for Diabetes (TRIAD), a prospective observational study of diabetes care in managed care. Physical functioning was assessed with the Short Form Health Survey, and the National Death Index was searched for deaths over 10 years of follow-up.

They study in the *Journal of Diabetes and Its Complications* concludes that self-reported physical functioning "was a robust independent predictor of mortality and may be a useful benchmark for tailoring clinical care."